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World Power Line Data

Predominant voltages and frequencies in 165 foreign cities having over 200,000 population, for designers of electronic equipment intended for export. Most common power outside U. S. is 50 cycles at 220 or 230 v. Values of d-c voltages are bold-face

Adelaide, Australia—3φ 50c 210/420v
Agra, India—3φ 50c 230/400v
Ahmedabad, India—3φ 50c 230/400v
Alexandria, Egypt—1φ 50c 115/230v
Algiers, Algeria—3φ 50c 115/200v
Altona, Germany—3φ 50c 220/380v; **220/440v; 110v**
Amritsar, India—3φ 50c 230/400v; **220/440v**
Amsterdam, Netherlands — 3φ 50c 220/380v
Amoy, China—3φ 60c 110/220v
Antwerp, Belgium—3φ 50c 115/200v
Athens, Greece—3φ 50c 220/380v
Auckland, New Zealand—3φ 50c 230/400v; **230/460v**
Avellaneda, Argentina—3φ 50c 220/380v
Bagdad, Iraq—3φ 50c 220/380v; **220/440v**
Baku, Russia—3φ 50c 120/210v
Bangkok, Siam—3φ 50c 110/220v
Bangalore, India—1φ 60c 220v
Batavia, Java—3φ 50c 127/220v
Belfast, Ireland—3φ 50c 220/380v
Belgrade, Yugoslavia—3φ 50c 220/380v & 120/206v
Benares, India—3φ 50c 230/400v
Berlin, Germany—3φ 50c 220/380v; **220/440v**
Birmingham, England—3φ 50c 230/400v; **220/440v**
Bochum, Germany—3φ 50c 220/380v & 127/220v
Bogota, Colombia—3φ 60c 150/260v
Bologna, Italy—3φ 42c 127/220v
Bombay, India—3φ 50c 230/400v; **220/460v**
Bordeaux, France—3φ 50c 115/200v; **110v**
Bradford, England—3φ 50c 230/400v; **220/440v**
Bremen, Germany—3φ 50c 230/400v & 125/216v
Breslau, Germany—3φ 50c 220/380v
Brisbane, Australia—3φ 50c 240/415v
Bristol, England—3φ 50c 210/365v; **250/500v**
Brno, Czechoslovakia—3φ 50c 110/220/380v
Brussels, Belgium—3φ 50c 110/190v
Bucharest, Roumania—3φ 50c 120/208v & 110/190v
Budapest, Hungary—3φ 50c 220/380v; **110v**
Buenos Aires, Argentina—3φ 50c **220/380v; 220/440v**
Cairo, Egypt—1φ 40c 100/200v; **110v**
Calcutta, India—3φ 50c 230/400v; **225/450v**
Cape Town, Union of South Africa—3φ
Canton, China—3φ 60c 220/380v & 110/190v
Cardiff, England—3φ 50c 200/230v; **200/400v**
Catania, Italy—3φ 50c 150/260v
Cawnpore, India—3φ 50c 220/400v; **225/450v**
Chemnitz, Germany—3φ 50c 120v
Chungking, China—3φ 50c 220/380v
Colombo, Ceylon—3φ 50c 230/400v; **220/440v**
Copenhagen, Denmark—3φ 50c 230/380v & 127/220v; **220/440v**
Cordoba, Argentina—3φ 50c 220/380v
Croydon, England—3φ 50c 220/400v; **220/460v**
Dairen, Kwantung province—3φ 50c 110/230v
Delhi, India—3φ 50c 200/400v; **220/440v**
Dortmund, Germany—3φ 50c 220/380v & 125/216v; **220/440v; 110v**
Dresden, Germany—3φ 50c 220/380v & 110/220v
Dublin, Ireland—3φ 50c 220/380v
Duisburg, Germany—3φ 50c 220/380v
Dusseldorf, Germany—3φ 50c 220/380v; **110v**
Edinburgh, Scotland—3φ 50c 230/400v; **220/460v**
Essen, Germany—3φ 50c 220/380v; **110v**
Florence, Italy—3φ 50c 150/260v; **150/300v**
Foochow, China—3φ 50c 220/380v
Frankfort, Germany—3φ 50c 220/380v & 127/220v
Genoa, Italy—3φ 50c 150/260v & 127/220v
Glasgow, Scotland—3φ 50c 250/440v; **250/500v**
Goteborg, Sweden—3φ 50c 120/380v
The Hague, Netherlands—3φ 50c 127/220v
Halle, Germany—3φ 50c 220/380v; **220/440v**
Hamburg, Germany—3φ 50c 220/380v; **220/440v; 110v**
Hankow, China—3φ 60c 220/380v; **220/440v**
Harbin, Manchukuo—3φ 50c 135/231v
Havana, Cuba—3φ 60c 110/220v
Helsingfors, Finland—3φ 50c 127/220v; **225/450v**
Hiroshima, Japan—3φ 60c 100/200v
Hong Kong China—3φ 50c 200/350v
Hull, England—3φ 50c 230/400v; **220/440v**
Hyderabad, India—3φ 50c 220/380v
Istanbul, Turkey—3φ 50c 220 380v & 110/190v
Karachi, India—3φ 50c 220/380v; **220/440v**
Kharkov, Russia—3φ 50c 110/190v
Kiel, Germany—3φ 50c 220/380v; **220/440v**
Kiev, Russia—3φ 50c 110v
Konigsberg, Germany—3φ 50c 220v
Kyoto, Japan—3φ 60c 100/200v
Lahore, India—3φ 50c 220/380v; **220/440v**
Leeds, England—3φ 50c 230/400v & 200/346v
Leicester, England—3φ 50c 240/415v; **230/440v**
Leipzig, Germany—3φ 50c 220/380v; **220/440v**
Leningrad, Russia—3φ 50c 120v
Lille, France—3φ 50c 120/208v; **120v**
Lima, Peru—3φ 60c 220v
Lisbon, Portugal—3φ 42c 220/380v; 3φ 50c 110/190v; **220/440v**
Liverpool, England—3φ 50c 230/400v; **230/460v**
London, England—3φ 50c 230/400v eventually; many kinds now
Lucknow, India—3φ 50c 230/400c; **220/460v**
Llow, Poland—3φ 50c 110/220v
Madras, India—3φ 50c 250/400v; **225/450v**
Madrid, Spain—3φ 50c 120v; **120v**
Magdeburg, Germany—3φ 50c 220/380v & 127/220v
Manchester, England—3φ 50c 230/400v; **200/400v**
Mannheim, Germany—3φ 50c 220/380v & 127/220v
Melbourne, Australia—3φ 50c **230/400v; 230/460v**
Messina, Italy—3φ 50c 150/260v
Milan, Italy—3φ 50c 150/260v; 3φ 42c 144/250v
Montevideo, Uruguay—3φ 50c 220v
Montreal, Canada—3φ 60c 115/230v
Moscow, Russia—3φ 50c 120v
Mukden, Manchukuo—3φ 60c 110/220v
Munich, Germany—3φ 50c 220/380v; **220/440v; 110v**
Nagpur, India—3φ 50c 230/400v; **220/440v**
Nanking, China—3φ 50c 220/380v
Naples, Italy—3φ 50c 150/260v; **220/440v**
Nice, France—3φ 25c 110/190v; **110v**
Ningpo, China—3φ 50c 220/380v
Oporto, Portugal—3φ 50c 220/380v & 110/190v
Oslo, Norway—3φ 50c 230v; **220/460v**
Palermo, Italy—3φ 50c 150/260v
Para, Brazil—3φ 50c 120/240v
Paris, France—3φ 50c 110/190v
Peiping, China—3φ 50c 220/380v
Pernambuco, Brazil—**220/440v**; 3φ 50c 220v
Perth, Australia—3φ 40c 240/440v
Piraeus, Greece—3φ 50c 220/380v & 200/346v; **230/460v**
Plymouth, England—3φ 50c 230/400v
Poona, India—3φ 50c 230/400v; **220/440v**
Portsmouth, England—3φ 50c 230/400v & 200/400v
Poznan Poland—3φ 50c 220/380v
Praha, Czechoslovakia—3φ 50c 120/220/380v
Riga, Latvia—3φ 50c 120/220/380v
Rio de Janeiro, Brazil—3φ 50c 125/216v
Rome, Italy—3φ 45c 127/220v
Rosario, Argentina—3φ 50c 220/380v; **220/440v**
Rotterdam, Netherlands—3φ 50c 230/380v; **220/440v**
Salford, England—3φ 50c 230/400v; **230/460v**
Saloniki, Greece—**220/440v**
Santiago, Chile—3φ 50c 220/380v; **220/440v**
Sao Paulo, Brazil—3φ 60c 120/208v
Sevilla, Spain—3φ 50c 127/220v; **110v**
Shanghai, China—3φ 50c 200/350v; 220/380v (Int. settlement). & 110/190v
Sheffield, England—3φ 50c 200/350v
Singapore, Straits Settlement—3φ 50c 230/400v; **230/460v**
Sofia, Bulgaria—3φ 50c 220/380v
Soerabaya, Dutch East Indies—3φ 50c 110/190v
Stettin, Germany—3φ 50c 220/380v; **220/440v**
Stockholm, Sweden—3φ 50c 220v; **220/440v**
Stoke-on-Trent, England—3φ 50c 240/415v; **220/440v**
Stuttgart, Germany—3φ 50c 220/380v & 127/220v; **110v; 220/440v**
Sydney, Australia—3φ 50c 240/415v; **240/480v**
Tabriz, Iran—3φ 50c 220/380v
Teheran, Iran—3φ 50c 220/380v
Tientsin, China—3φ 50c 220/380v
Tokio, Japan—3φ 50c 100/200v; 3φ 60c 100/200v
Toronto, Canada—3φ 25c 115/230v
Trieste, Italy—3φ 42c 127/220v
Tsinan, China—3φ 50c 220/380v & 110/190v
Tsingtao, China—3φ 50c 120/200v
Tunis, Tunisia—3φ 50c 110/190v
Turin, Italy—3φ 50c 127/220v
Valparaiso, Chile—3φ 60c 220/380v; **220/440v**
Vancouver, Canada—3φ 60c 110/220v
Venice, Italy—3φ 42c 127/220v
Vienna, Austria—3φ 50c 220/380v
Warsaw, Poland—3φ 50c 120/220v
Winnepeg, Canada—3φ 60c 120/220v
Zurich, Switzerland—3φ 50c 220/380v, 125/220v, & 145/250v; 1φ 50c 110/220v & 220/440v

Data given here was obtained from "World Electrical Markets," a publication of the Electrical Division, Bureau of Foreign and Domestic Commerce, Washington, D. C. Power data for cities not listed here and for entire countries can be obtained by writing to the Bureau. Abbreviations used here are: c—cycles per second; φ—phase (single-phase power is of course available where 3φ is indicated); v—volts; /—and, signifying both voltages are available.

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